

PCA UPDATE

DEEP VEIN THROMBOSIS AND PULMONARY EMBOLISM WITH KNEE INJURIES

January, 2002

Recently, the Board's Patient Care Assessment (PCA) Committee reviewed a series of major incident reports of pulmonary embolism (PE), some of which resulted in death or anoxic brain damage. All of the events followed relatively minor and common knee injuries. Examples of the incidents reviewed are as follows. Two patients had sudden pulmonary embolic events during or immediately following knee surgery. (One patient had a repair of a ruptured patella and the other patient had an incision and drainage of a knee effusion.) These events were believed to be associated with venous injury. Another incident involved a patient with a cruciate ligament injury who had a respiratory arrest during physical therapy, presumably from a PE. And lastly, a patient suffered progressive pulmonary deterioration following knee immobilization. Prior to the diagnosis of PE, the patient's signs and symptoms of chest pain and shortness of breath were thought to be pneumonia. Following the internal investigations of these incidents, the reporting hospitals determined, in some of the cases, that the patients had risk factors for deep vein thrombosis (DVT), in addition to surgery or immobilization (such as obesity, cancer, or use of oral contraceptives), that were not adequately appreciated.

These cases justify a reminder that the serious complications associated with DVT and PE necessitate that physicians always consider the use of prophylactic measures with any knee injury. Venous injuries may not be accompanied by clear presenting signs and symptoms, and reliance on clinical signs of DVT can result in missed or delayed diagnoses. It is well established that morbidity and mortality from DVT are most effectively reduced by prevention and early diagnosis, while the disease is asymptomatic. The physician responsible for a patient with knee disruptions, fractures, tears, or other injuries, should determine whether a high risk for venous thrombosis exists and consider prophylactic anticoagulation for prevention (if the benefits of this therapy outweigh the risks) or venous ultrasound for early diagnosis and possible treatment.

Please remind all physicians and surgeons at your facility of the importance of appropriately focused medical histories and physical examinations to determine the risk of venous complications in patients presenting with knee injuries. Also, please ask your professional staff to review their policies, procedures, and guidelines for the use of prophylactic anticoagulation in patients with knee injuries.

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